

# West Virginia - 2002

## Forest Health Highlights



### The Resource

The West Virginia landscape is dominated by more than 11.8 million acres of forest. Due in large part to its varied topography, the forests are a rich diversity of oaks, hickories, yellow poplar, spruce, pines, and the State tree – sugar maple. Ninety percent of all forests in the State are privately owned, but there are 9 state forests, 36 state parks, and 56 wildlife management areas that provide for public enjoyment.

### Forest Stewardship

The Forest Stewardship Program philosophy ensures that private landowners apply environmental and economic resource management principles to benefit themselves, future landowners, and the public. The focal point of the Forest Stewardship Program is the development of a long-term management plan for each woodland owner, who is willing to participate. In West Virginia, the Forest Stewardship Program includes having a forest management plan written by a professional forester, as well as financial assistance for reforestation, forest improvement, soil and water protection, wetlands protection, fisheries habitat enhancement, wildlife habitat enhancement, and forest recreation enhancement. In West Virginia, 3,719 stewardship plans covering more than 633,000 acres have been developed for landowners as of October 16, 2002.

### Special Issues

**Gypsy Moth** – In 1999, zero acres qualified for gypsy moth suppression treatment, and zero acres of defoliation were detected. This was thought to be largely due to the presence of

viruses and the gypsy moth fungus. However, the gypsy moth population in the Cooperative State, County, and Landowner (CSCL) Program counties of West Virginia rebounded dramatically, in part because of dry spring conditions that limited fungal infection of gypsy moth caterpillars. Male moth catches increased in the Slow the Spread (STS) Project area, but the greatest resurgence in the gypsy moth populations has occurred in the generally infested area of the State. A total of 7,417 acres were treated in 2000, and 299,418 acres of defoliation were recorded. In 2001, a total of 136,900 acres were treated, and 603,630 acres of defoliation were mapped. Gypsy moth populations declined slightly in 2002, with a total of 74,584 acres treated, and 132,197 acres of defoliation recorded. The 2002 program suppression chemicals included Dimilin (64,469 acres), *Bacillus thuringiensis* var. *kurstaki* (4,815 acres), and Gypchek (1,300 acres).

The West Virginia Department of Agriculture (WVDA) Field Agents saw evidence of both the gypsy moth virus and fungus during the 2001 season, but there was little effect on the population. Because of the wet spring, the presence of the fungus was more evident during late May and June of 2002 than in 2001, and there was a decline in the gypsy moth larval population. However, gypsy moth egg mass surveys, conducted in the fall of 2002, revealed isolated areas with large, healthy egg masses. This suggests that gypsy moth populations could rapidly rebound.

**Beech Bark Disease (BBD)** – In 1981, beech scale, the insect component of the beech bark disease complex, was found infesting beech timber over 70,000 acres of forestland. By 1998, the scale insect infested beech trees over an area encompassing 1,352,807 acres in Grant, Barbour, Randolph, Tucker, Pocahontas, Upshur, and Pendleton Counties. The beech bark disease-killing front encompassed 914,972 acres of forestland in all but Barbour and Grant Counties. The 2002 survey found scale infested beech trees over an area encompassing 2,417,000 acres in parts of 12 counties, while the killing front was detected over an area encompassing 1,246,373 acres in portions of six counties. In 4 years, beech scale has spread into five new counties including: Greenbrier, Mineral, Nicholas, Preston, and Webster. Currently, there are no efforts underway to attempt control of beech bark disease.

**Hemlock Woolly Adelgid (HWA)** – HWA was detected for the first time in three new counties during 2002: Fayette, Nicholas, and Preston. Additionally, the WVDA made seven releases of *Pseudoscytnus tsugae* Sasaji and McClure adults in West Virginia in 2002. The release sites included Greenbrier State Forest, Beartown State Park, Droop Mountain Battlefield State Park, Watoga State Park, Lost River State Park, Ice Mountain, and Cathedral State Park. West Virginia is now monitoring 12 release sites on an annual basis. The releases enable us to study the effect of *P. tsugae* against HWA as part of an USDA-Forest Service multi-state predator impact study and also attempts establishment of *P. tsugae* populations in HWA infested stands. The predaceous beetle is the size of a poppy seed, feeds on all life stages of the adelgid, and is one of the most widespread and effective predators of HWA in Japan. Its potential as a biological control agent against HWA is extremely promising based on studies conducted by Mark McClure in Connecticut. Laboratory experiments also indicate the beetle will feed on other harmful adelgids such as balsam woolly adelgid, Cooley spruce gall adelgid, and pine bark adelgid.

**Southern Pine Beetle** – Ground and Lindgren funnel trap surveys detected SPB at low levels in spotty, isolated areas in Jackson, Wayne, Kanawha, Logan, and Lincoln Counties during 2002. Surveys were conducted to see if West Virginia was included in the outbreak conditions of SPB in Kentucky and Virginia.

**Oak Wilt Survey** - Aerial oak wilt surveys were conducted over Ohio, Brooke, Tucker, and Webster Counties, the four historically oak wilt free counties.

Additionally, aerial surveys were conducted over four high disease incidence quadrangles in the Eastern Panhandle. No oak wilt centers were detected in Brooke, Ohio, Tucker, and Webster Counties. A total of 20 oak wilt disease centers were detected in the four high disease incidence quadrangles. Of the 20 centers detected, 17 were in Grant County, and three were detected in Hardy County.

## Forest Fires

The State of West Virginia has experienced 4 years of drought conditions. The year of 2002 had extremely long periods of dry weather. Although the month of October was the wettest in the history of the State, ground table water is still very low. There were some parts of the State that ended 2002 with deficits from normal precipitation. For the year 2002, there were 1,002 fires burning approximately 9,500 acres. This resulted in estimated damages to the timber resource of \$3,000,000.00. The cost to suppress these wildfires was in excess of \$250,000. Arson and debris burning are still the leading causes of wildland fires in West Virginia.

## Forest Health Monitoring

Since 1995, the West Virginia Division of Forestry has maintained a permanent network of 162 plots to monitor forest health conditions across the State. In 2002, the USDA Forest Service merged the Forest Health Monitoring Program into the Forest Inventory Analysis program. Plot information, such as soil, lichens, tree damage, and crown density, is still being collected. The collection, once done by the West Virginia Division of Forestry's personnel, is now conducted by USDA Forest Service employees.

### For More Information



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